



Unit 5 • Life Process: sexual reproduction in plants and animals

Name _____ Class _____ Roll no. _____ Date _____ Marks _____ / 38

1 Key words

[4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

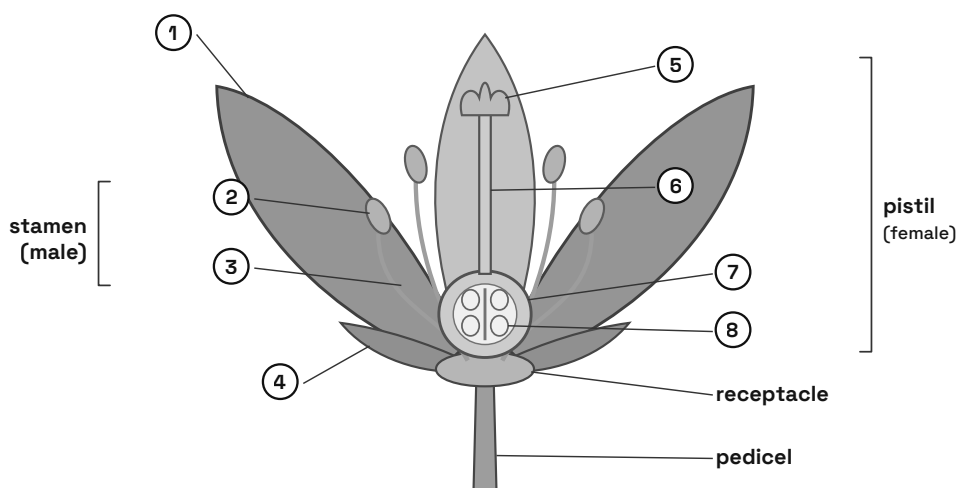
anemophily autogamy bisexual double fertilization entomophily gametogenesis
ornithophily pollination sexual reproduction zygote

Reproduction by the fusion of a male gamete and a female gamete of the same species is called _____, and the fused cell is the _____. An organism with both male and female organs in the same body, like an earthworm, is _____. The transfer of pollen grains from an anther to a stigma is called _____. When pollen falls on the stigma of the same flower, it is called _____. Pollination by the wind is called _____, and pollination by birds is called _____. Two fusions happen in each ovule of a flowering plant, so this is called _____.

2 Label the diagram

[4]

The diagram shows a flower cut in half. Write the names of the parts numbered 1 to 8. Each carries 0.5 mark.



1. _____
3. _____
5. _____
7. _____

2. _____
4. _____
6. _____
8. _____



[5]

Choose the correct option for each of the following questions.

- i. Where does fertilization take place in flowering plants? [1]
 - a. in the stigma
 - b. in the ovary
 - c. in the ovule
 - d. in the style
- ii. What is pollination by flies called? [1]
 - a. self-pollination
 - b. pollen germination
 - c. ornithophily
 - d. entomophily
- iii. A flower is small and green, with no scent and no nectar, and makes huge amounts of light, dry pollen. Its stigmas are long and feathery. How is it pollinated? [1]
 - a. by insects
 - b. by birds
 - c. by the wind
 - d. by water
- iv. Which of these animals has internal fertilization? [1]
 - a. lizard
 - b. frog
 - c. rohu fish
 - d. toad
- v. Which sequence is right for pollination and what follows in a flowering plant? [1]
 - a. anther, stigma, pollen grain, pollen tube
 - b. anther, pollen grain, stigma, germination of the pollen
 - c. pollen tube, pollen grain, style, anther
 - d. pollen grain, anther, pollen tube, stigma

[3]

Write very short answers to the following questions.

- a. Which part of a sperm is packed with mitochondria? [1]
-
-
- b. What does the ovule of a flower become after fertilization? [1]
-
-
- c. Many sperms may reach an egg. Why does only one of them fertilize it? [1]

[8]

Write short answers to the following questions.

- a. Give a reason: pollinating agents have a great role in pollination. [2]
-
-
-



b. Give a reason: external fertilization takes place in water, or in very wet places on land. [2]

c. Write any two differences between pollination and fertilization. [2]

d. What is gametogenesis? Where does it take place in animals? [2]

6 Long answers [8]

Write long answers to the following questions.

a. What is double fertilization? Describe it briefly. [4]

b. Write any four differences between self-pollination and cross-pollination. [4]



[4]

Solve the following problems. Show your working.

- a. A maize pollen tube grows down a silk thread 24 cm long at about 1 cm an hour. About how long does it take to reach the ovule? Write your answer in hours, and in days.

Answer:

- b. A human ovum is about 0.1 mm across. How many ova laid side by side would make a row 1 cm long? (1 cm = 10 mm)

Answer:

[2]

Think, then answer.

In some valleys of China, wild bees have become scarce, and farmers pollinate their apple trees by hand, flower by flower, with brushes. Why must they do this?

(not marked)

Brush a little pollen from the ripe anthers of each flower onto a slide, add a drop of water and a cover slip, look at it under the microscope, and fill in the table.

Flower	Color of the pollen	Shape of a grain	Surface: smooth, spiky or ridged?
mustard			
hibiscus			
lily			

